

U.S. Patent Application Serial No. 09/916,314
Amendment filed November 30, 2004
Reply to OA dated September 1, 2004

REMARKS

Claims 2 and 4-20 are pending in this application. Claims 4-6 and 9-19 are withdrawn from consideration, and claims 2 and 20 have been indicated as allowed. No amendment is made in this Response. It is believed that this Response is fully responsive to the Office Action dated September 1, 2004.

Claims 7 and 8 are rejected under 35 U.S.C. §103(a) as being unpatentable over Kita et al. (US 6,656,608). (Office action paragraph no. 5)

The rejection of claims 7 and 8 is respectfully traversed.

The anode buffer layer (the buffer layer arranged between the anode and the organic EL layer) of the organic EL element of the present invention is formed of at least one type metal selected from a group consisting of vanadium, ruthenium and molybdenum, and the surface of which is oxidized. That is, the anode buffer layer of the present invention is a metallic layer formed of vanadium, for example, the surface of which is oxidized.

In the present invention, the metallic layer (the anode buffer layer) is formed of vanadium, for example, and then the surface of the metallic layer is oxidized. By virtue of the oxidizing, the evenness of the surface of the anode buffer layer is excellent. And, by the oxidizing, vanadium oxide (in the case of vanadium) is formed on the surface of the metallic layer. Due to the vanadium oxide, the operating threshold voltage of the organic EL element is low. In thus manner, in the

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present invention, it is possible to achieve both of the excellent evenness of the surface of the anode buffer layer and the low operating threshold voltage of the organic EL.

On the other hand, the anode buffer layer of the organic EL element of Kita et al. is an oxide layer comprising vanadium oxide.

That is, the present invention in which the anode buffer layer is the metallic layer is fundamentally structurally different from that of Kita et al. in that the anode buffer layer is the oxide layer. Moreover, in Kita et al., it is not disclosed nor suggested that the metallic layer is used as the anode buffer layer.

Accordingly, by the structure of the anode buffer layer above described, the present invention has the effect that it is possible to achieve both the excellent evenness of the surface of the anode buffer layer and the low operating threshold voltage of the organic EL, that the device of Kita et al. does not have.

Applicant therefore submits that claims 7 and 8 are novel and non-obvious over Kita et al. '608. Reconsideration of the rejection is respectfully requested.

If, for any reason, it is felt that this application is not now in condition for allowance, the Examiner is requested to contact Applicant's undersigned agent at the telephone number indicated below to arrange for an interview to expedite the disposition of this case.

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In the event that this paper is not timely filed, Applicant respectfully petitions for an appropriate extension of time. Please charge any fees for such an extension of time and any other fees which may be due with respect to this paper, to Deposit Account No. 01-2340.

Respectfully submitted,

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